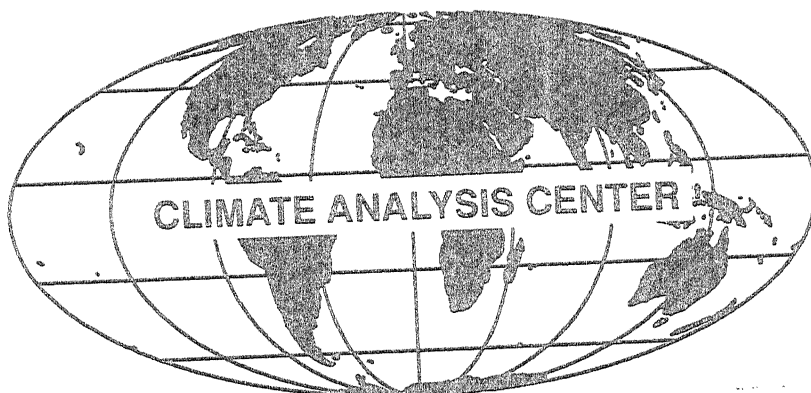


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WEEKLY CLIMATE BULLETIN

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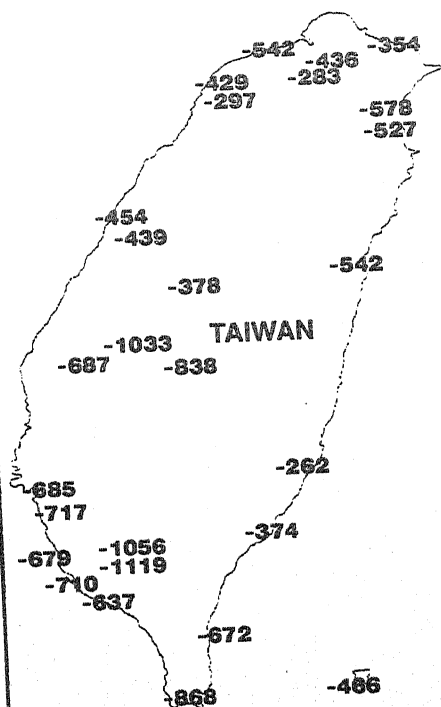
Washington, DC

October 20, 1993

DEPARTURE FROM NORMAL PRECIPITATION (mm)

July 4 – October 16, 1993 [105 days]

-311



MORE THAN FOUR MONTHS OF EXCEPTIONALLY DRY WEATHER RECORDED ACROSS TAIWAN AND THE SOUTHERN RYUKYUS.

Since early July, abnormally low rainfall totals were measured through Taiwan and the southern Ryukyus. All but a few locations in extreme northeastern, central, and coastal southeastern Taiwan received less than half of normal rainfall during July 4 – October 16, 1993, with 37% – 70% of normal totals reported through the southern Ryukyus. The western and extreme southern portions of Taiwan were particularly affected, with only 16% – 35% of normal amounts observed at most locations. Measured rainfall totals were lowest along the western coast of Taiwan, where only 80–170 mm fell (compared to normals of 400–600 mm for the period). In southwestern portions of the country, where 900–1500 mm are typically recorded for the 105-day period, amounts of only 290–410 mm were measured. Amounts exceeding 600 mm were restricted to southeastern sections of the country while, farther east, between 270 and 465 mm of rain dampened the Ryukyus. According to press reports, the prolonged dry spell has affected crops throughout the region.

Stations required at least 94 days (90%) for inclusion.

CLIMATE ANALYSIS CENTER, NOAA

UNITED STATES DEPARTMENT OF COMMERCE
 NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
 NATIONAL WEATHER SERVICE–NATIONAL METEOROLOGICAL CENTER
CLIMATE ANALYSIS CENTER



WEEKLY CLIMATE BULLETIN

This Bulletin is issued weekly by the Climate Analysis Center and is designed to indicate, in a brief concise format, current surface climatic conditions in the United States and around the world. The Bulletin contains:

- Highlights of major climatic events and anomalies.
- U.S. climatic conditions for the previous week.
- U.S. apparent temperatures (summer) or wind chill (winter).
- Global two-week temperature anomalies.
- Global four-week precipitation anomalies.
- Global monthly temperature and precipitation anomalies.
- Global three-month precipitation anomalies (once a month).
- Global three-month temperature anomalies (once a month).
- Global twelve-month precipitation anomalies (every three months).
- Global twelve-month temperature anomalies (every three months).
- Special climate summaries, explanations, etc. (as appropriate).

Most analyses contained in this Bulletin are based on preliminary, unchecked data received at the Climate Analysis Center via the Global Telecommunications System. Similar analyses based on final, checked data are likely to differ to some extent from those presented here.

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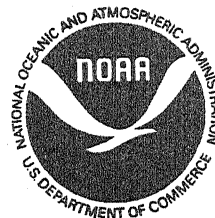
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GLOBAL CLIMATE HIGHLIGHTS

MAJOR CLIMATIC EVENTS AND ANOMALIES AS OF OCTOBER 24, 1992

1. Northwestern North America:

MORE COLD WEATHER

Temperatures averaged 3°C to 8°C below normal, and the mercury plummeted as low as -39°C in the Yukon. Daily departures reached -15°C in northwestern sections of the afflicted region [16 weeks].

2. Southwestern United States:

STILL UNUSUALLY WARM

Weekly departures of +2°C to +5°C were observed, with interior central and southern California and northern sections of Nevada reporting the smallest deviations from normal [5 weeks].

3. Northern and Western Europe:

BITTERLY COLD AIR ENGULFS REGION

Most locations averaged 3°C to 14°C below normal for the second consecutive week. Last week's largest departures were recorded in much of interior Scandinavia, where lows dropped to -27°C, while wind chills under -40°C were produced in portions of northern European Russia and northwestern Siberia [2 weeks].

4. Southern Europe:

MODERATE TO HEAVY PRECIPITATION AGAIN REPORTED

Generally 20 mm to 60 mm of rain dampened the already saturated region, although much higher totals were measured in north-central Spain and adjacent France (100 mm to 155 mm), northern Italy (100 mm to 135 mm), and southwestern former Yugoslavia (up to 306 mm). Press reports indicate that widespread flooding resulted from the rains in northern Italy, especially in Tuscany and Venice. During the last month, surpluses of 100 mm to 275 mm have accumulated at scattered locations throughout the area, particularly in Spain, France, and Italy [4 weeks].

5. Southern Turkey and Greece:

MOISTURE DEFICITS INCREASE

Little or no precipitation was observed across the region, allowing six-week shortfalls to climb between 65 mm and 110 mm [29 weeks].

6. Southwestern Asia:

WARMER AIR COVERS EASTERN TURKEY AND WESTERN IRAN AS COOL CONDITIONS SHIFT EASTWARD

Near to above normal temperatures dominated eastern Turkey and western Iran, bringing an end to the recent cool snap [Ended after 5 weeks]. Farther east, however, well below normal readings were recorded for the second consecutive week, with departures of -2°C to -8°C reported in southeastern Iran and southern Pakistan [2 weeks].

7. Southeastern Asia:

EXCESSIVELY WET CONDITIONS CONTINUE AS FORMER TYPHOON ANGELA BATTERS REGION

Most weather reporting stations shut down for the duration of Angela, so accurate rainfall totals are not available. According to press reports, however, over a dozen people were killed as the storm slowly trekked into central Vietnam during Oct 21 - 23, packing wind gusts of up to 90 kph (the slowly-moving system had weakened as it interacted with the Vietnamese coast). The storm reportedly damaged thousands of hectares of rice and vegetable crops, cut communication lines, and broke road and rail links in the country. Since early October, between 150 mm and 500 mm above normal rainfall has drenched much of central Vietnam, not counting the rains from Angela [3 weeks].

8. Southeastern China:

VERY DRY CONDITIONS CONTINUE

Little or no rain fell throughout the region as six-week moisture shortages increased. Deficits reached 100 mm to 205 mm in the normally wetter areas of southeastern China and Taiwan [16 weeks].

9. South-Central Australia:

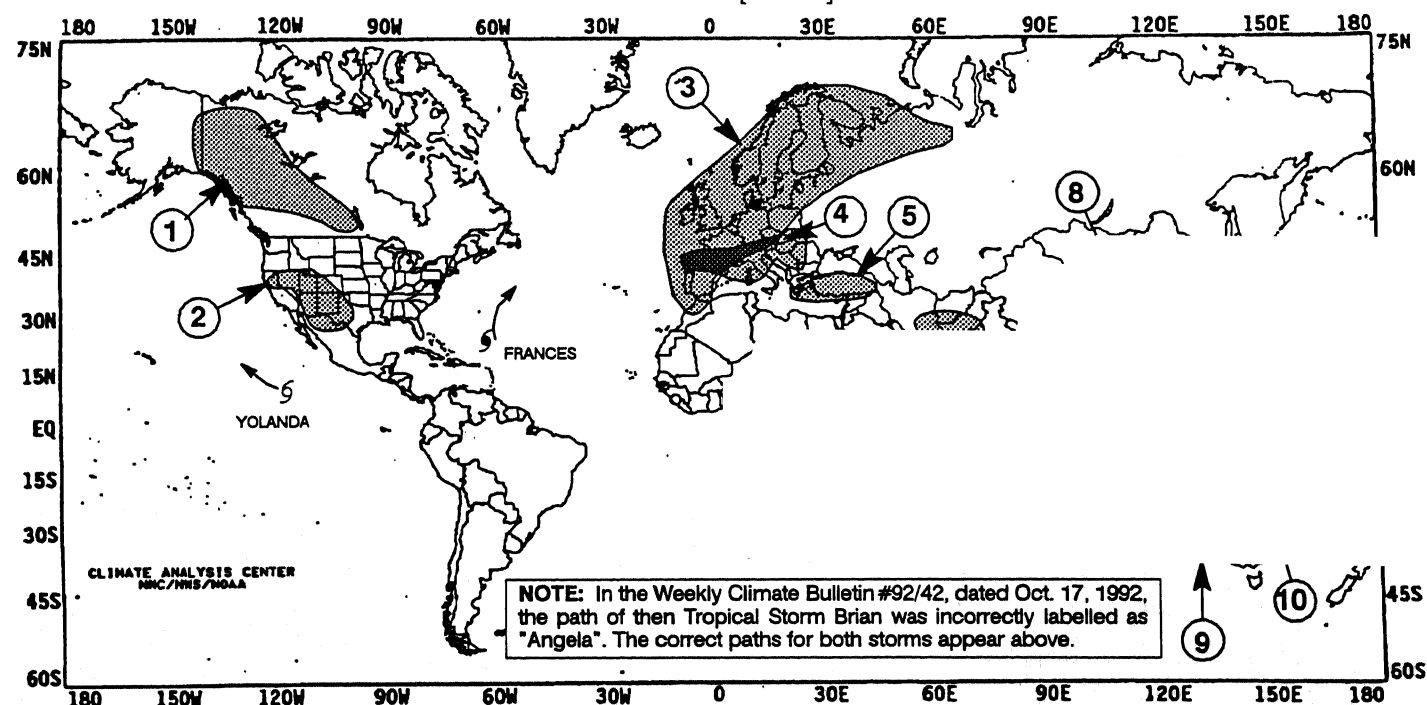
DRIER WEATHER PREVAILS

Although little or no precipitation was reported last week, six-week precipitation totals remained between 2 and 4 times the normal amount [Ending after 6 weeks].

10. Northeastern Australia:

LIGHT PRECIPITATION OBSERVED

Most locations received 5 to 20 mm of rain, keeping the dry spell intact [5 weeks].



EXPLANATION

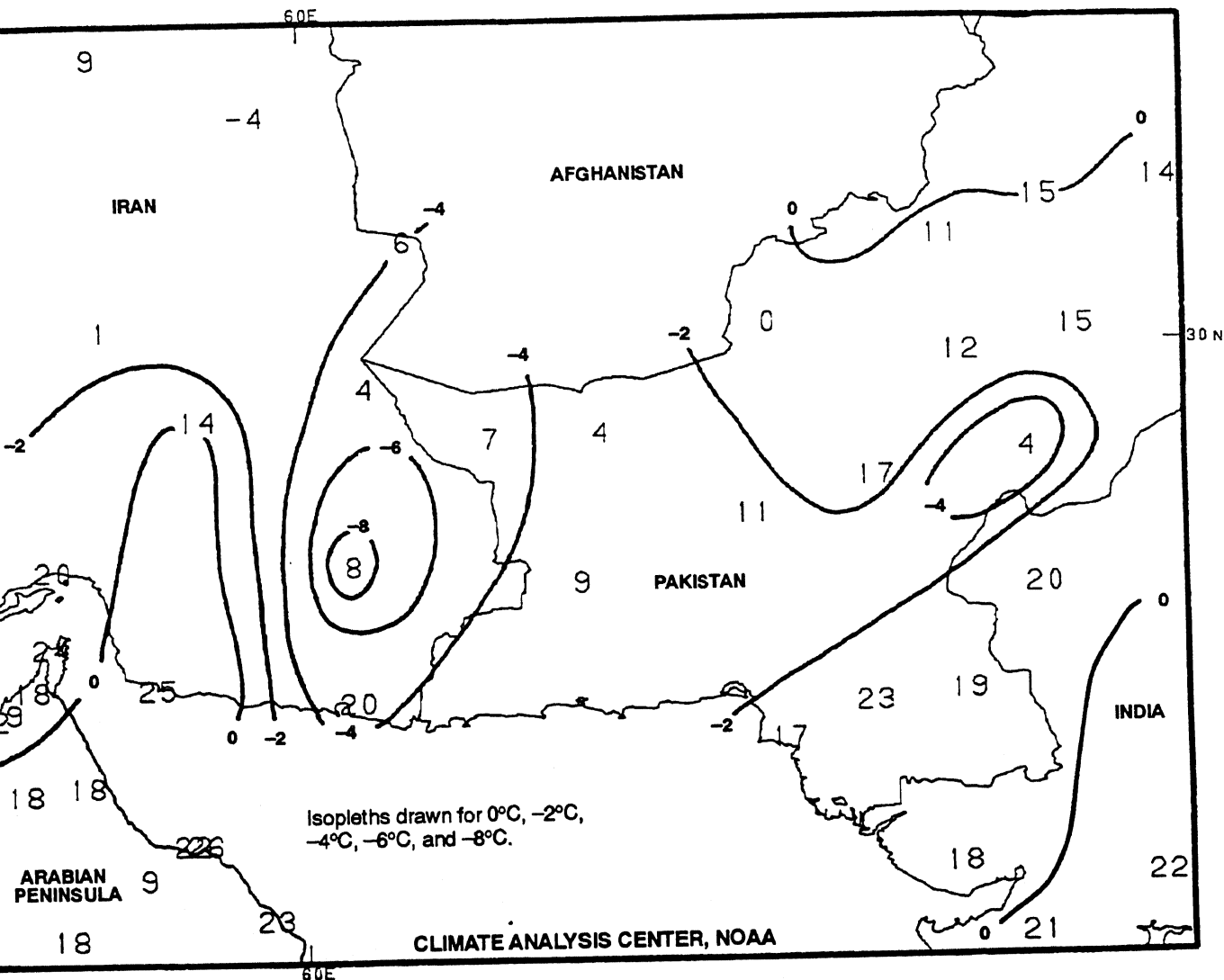
TEXT: Approximate duration of anomalies is in brackets. Precipitation amounts and temperature departures are this week's values.

MAP: Approximate locations of major anomalies and episodic events are shown. See other maps in this Bulletin for current two week temperature anomalies, four week precipitation anomalies, long-term anomalies, and other details.

GLOBAL CLIMATE HIGHLIGHTS FEATURE

PLOTTED VALUES: EXTREME MINIMUM TEMPERATURE (°C)
CONTOURS: DEPARTURE OF AVERAGE TEMPERATURE FROM NORMAL (°C)

October 18 – 24, 1992



WELL BELOW NORMAL TEMPERATURES INVADE SOUTHWESTERN ASIA.

While warmer weather brought an end to the cool spell across eastern Turkey and western Iran (not on map), unusually cold air spilled into eastern Iran, southern Pakistan, and probably portions of Afghanistan (although reliable data are lacking in the latter country). Lows dropped below 10°C as far south as southeastern Iran and southwestern Pakistan despite highs of 25°C to 32°C early in the period, generating weekly departures of -2°C to -8°C.

UNITED STATES CLIMATE HIGHLIGHTS

FOR THE WEEK OF OCTOBER 18-24, 1992

Winterlike weather affected the northeastern quarter of the nation as a blast of frigid Canadian air plunged into the eastern U.S. while springlike warmth settled across the central and western parts of the nation. Snow fell from the Great Lakes to the central Appalachians, with up to 4 inches measured in northern Michigan and western Pennsylvania. A wintry mixture of sleet and snow was reported as far south as the mountains of North Carolina. In addition, unseasonably cold conditions yielded more than two dozen record daily lows from the Midwest to the mid-Atlantic as subfreezing readings dipped as far south as South Carolina. The mercury plunged into the teens in the northern Plains, the Midwest, and the central Appalachians. Springfield, IL reported a record daily low of 19°F on Monday, which was also a record for the lowest reading so early in the season. In contrast, abnormally warm weather dominated from the Northwest to the Great Plains, producing more than two dozen record daily highs from Washington to Minnesota. Daily temperatures were up to 25°F above normal across parts of the northern Plains as readings soared into the eighties. Meanwhile, thunderstorms pounded parts of the Southwest and southern Plains, dumping heavy rains and generating strong wind gusts. More than 2 inches of rain soaked Kingman, AZ on Saturday, and heavy rain caused minor flooding in Las Vegas, NV. Farther north, bitterly cold weather affected east-central Alaska, with sub-zero readings common at several locations. The mercury at Northway, AK plunged to a record daily low of -22°F on Sunday. In the Atlantic Ocean, the sixth tropical storm of the year developed on Friday and rapidly grew into Hurricane Frances. The storm trekked northeastward into the open waters of the Atlantic, never threatening land.

The week began with relatively tranquil conditions across most of the contiguous U.S. as domes of high pressure dominated both the West and the East. Unseasonably cold conditions prevailed from the Dakotas to the mid-Atlantic. More than a dozen record daily lows were established on Monday and nearly a dozen more were set on Tuesday as readings dipped into the twenties as far south as western North Carolina. The cold weather was accompanied by up to four inches of snow across parts of the Ohio Valley and central Appalachians while a wintry mixture of precipitation fell on Grandfather Mountain in North Carolina on Sunday. Snow downed power lines in western Pennsylvania and contributed to a multiple-vehicle accident in northern Ohio. Farther west, heavy dense fog contributed to an accident on I-15 near San Bernardino, CA, involving more than two dozen vehicles.

During the last half of the week a warming trend commenced across the nation's midsection. Readings soared into the eighties across the Great Plains, yielding more than a dozen record daily highs from Montana to Minnesota on Wednesday and Thursday, including 89°F at Rapid City, SD. Mild weather also produced a record 224th consecutive day without freezing temperatures at Salt Lake City, UT on Wednesday. Farther south, thunderstorms packing heavy rain soaked portions of the Southwest and southern Plains. More than 4 inches of rain inundated Hidalgo County, TX.

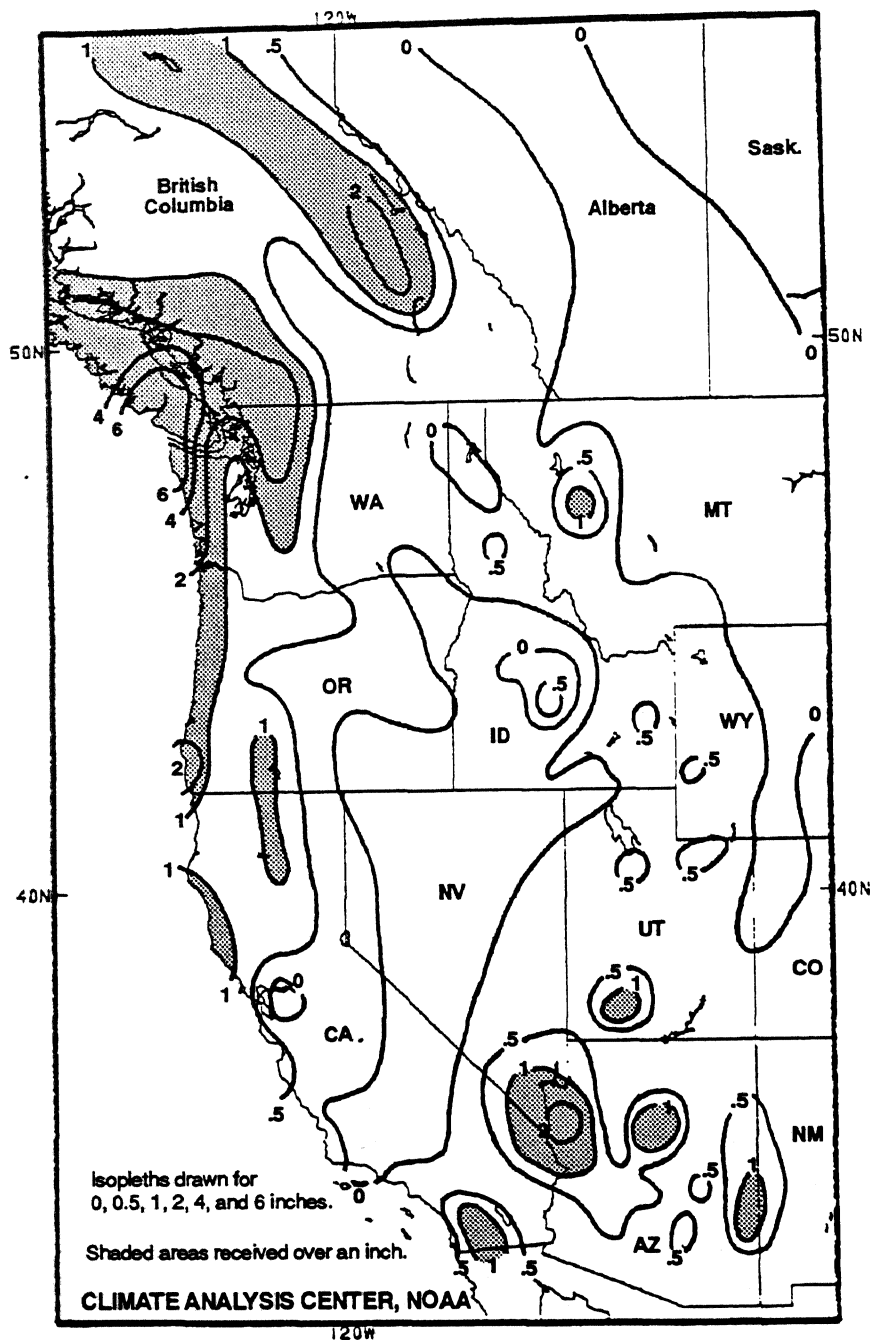
According to the River Forecast Centers, the greatest weekly precipitation totals (more than 2 inches) fell on a few scattered locations in the Northeast, southern Texas, the Southwest, and southeast Alaska. Light to moderate amounts were recorded across the remainder of the Northeast, the Great Lakes, eastern Kansas and Oklahoma, central Arkansas, extreme southern Texas, the Southwest, the eastern halves of Oregon and Washington, the southern tier of Alaska, and eastern Hawaii. Little or no precipitation occurred in the middle and southern Atlantic, the deep South, the remainders of the Mississippi Valley and Great Plains, the Rockies, the Far West, the northern two thirds of Alaska, and the rest of the Hawaii.

Unseasonably warm conditions prevailed from the lower Mississippi Valley northwestward to the
departures of +8°F to +11°F were common.
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NORTH AMERICAN CLIMATE HIGHLIGHTS FEATURE

TOTAL PRECIPITATION (IN)

October 18 – 24, 1992

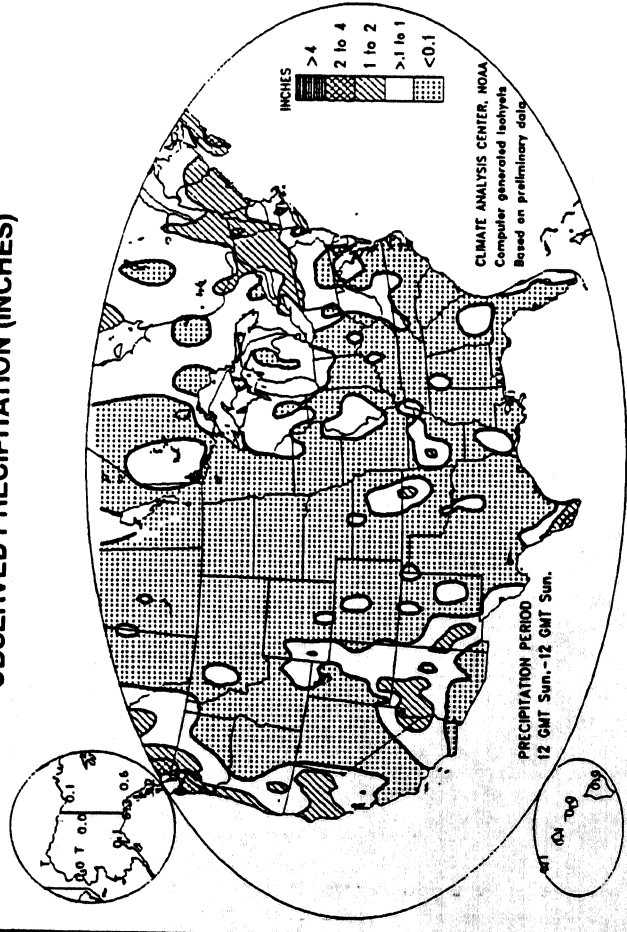


THE FIRST WIDESPREAD, SIGNIFICANT PRECIPITATION OF THE 1992–1993 WET SEASON FALLS ON PORTIONS OF THE WESTERN UNITED STATES AND SOUTHWESTERN CANADA.

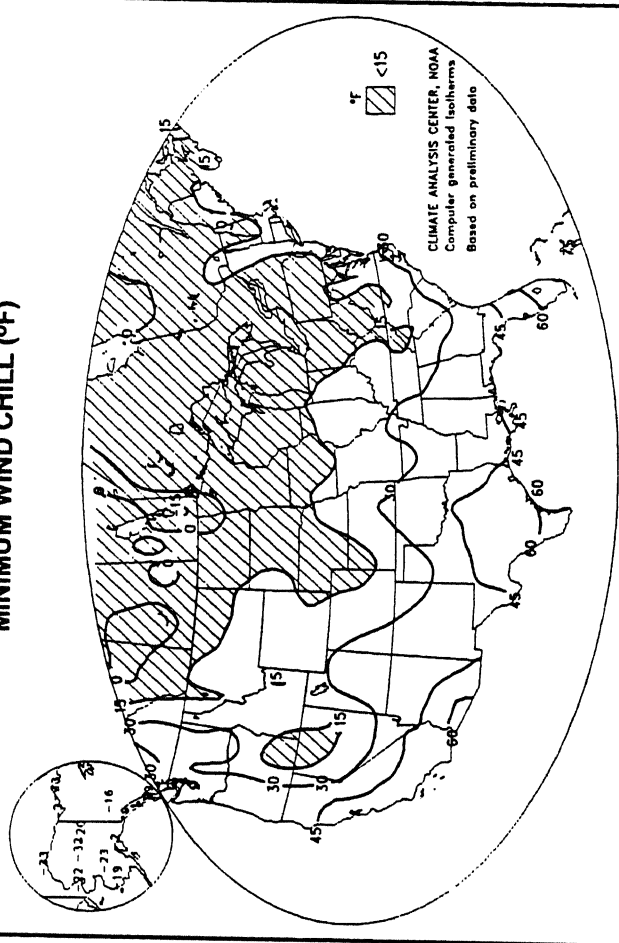
Sporadic moderate rains have dampened portions of the Pacific Northwest and southwestern Canada since mid-August, and heavy rains drenched much of central Arizona during August and early September. The third full week of October, however, brought the first extensive light to moderate totals to the Pacific coast from central California northward, where October marks the beginning of the new water year. Amounts topped 7.5 inches in extreme northwestern Washington and on parts of Vancouver Island. Farther south, an upper-level disturbance generated isolated heavy thunderstorms in southern California and the desert Southwest. Scattered flash flooding in extreme southern Nevada and parts of Arizona resulted from over 2 inches of rain in some areas, most of which fell within a few hours.

UNITED STATES WEEKLY CLIMATE CONDITIONS (October 18 – 24, 1992)

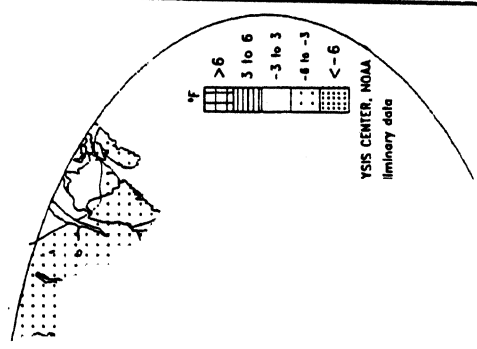
OBSERVED PRECIPITATION (INCHES)



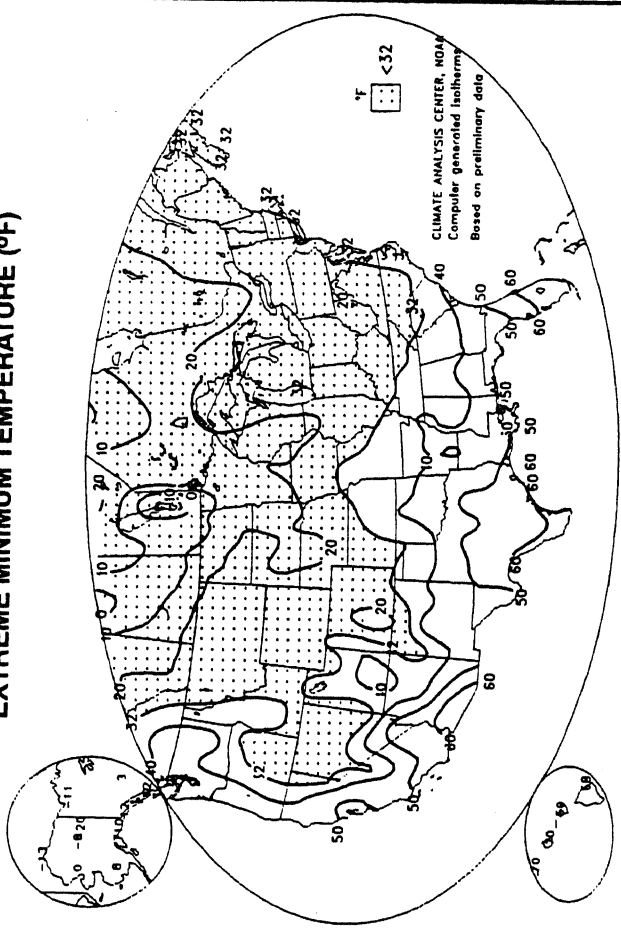
MINIMUM WIND CHILL (°F)



°F AVERAGE TEMPERATURE
OM NORMAL (°F)

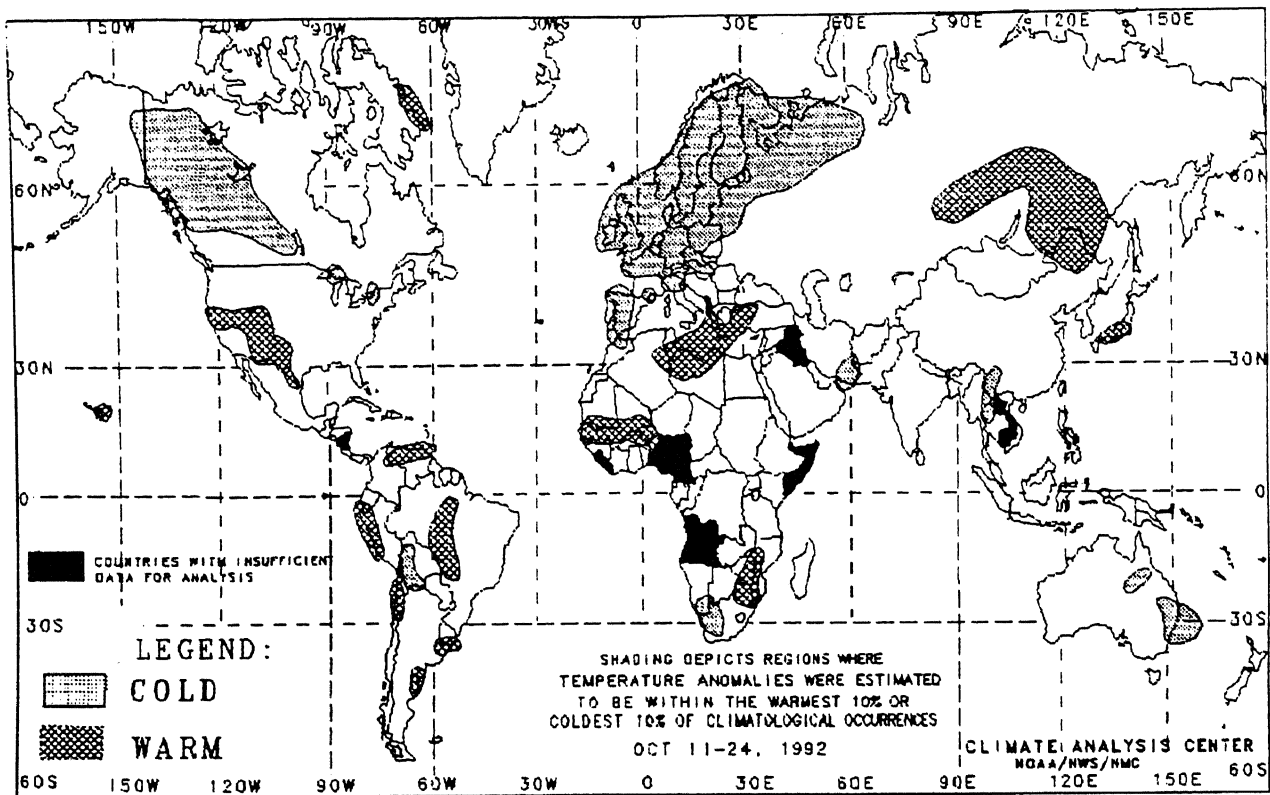


EXTREME MINIMUM TEMPERATURE (°F)



2-WEEK GLOBAL TEMPERATURE ANOMALIES

OCTOBER 11 – 24, 1992



4-WEEK GLOBAL PRECIPITATION ANOMALIES

SEPTEMBER 27 – OCTOBER 24, 1992

